

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000731**Date Inspected:** 28-Oct-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sha Zhi, Xu Lefeng**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Recieving Plate Material/89M Mock-up**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector Sherri Brannon arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QA Inspector observed and/or discovered the following.

**Plate Material Storage:**

Quality Assurance (QA) Inspector Brannon received plate material list for batch #29, plate list No. 2170~2214 received from American Bridge/Fluor (ABF). QA Inspector Brannon went to the ZPMC material storage yard accompanied by ZPMC Quality Control Mr. Sun Bo. QA Inspector Brannon observed a total of 13 out of 45 plates for batch #29. The plates were observed for their general condition and markings. Plate material thicknesses range from 12mm to 20mm. The plates were designated as A709M-345T2-X, A709-345F2-X, A709-345F2-X-Z and A709M-345T2-X-S. Plate material list for batch #29 was accompanied with material test reports (MTR's). The MTR's could not be reviewed on this date and will be reviewed at the earliest opportunity. QA Inspector Brannon assigned lot number B22-057-07 to the 13 plates observed on this date. Note: ZPMC Quality Control Mr. Sun Bo informed QA Inspector Brannon that 2 plates from Batch #29 could not located.

**Plate Material Storage:**

Quality Assurance (QA) Inspector Brannon received plate material list for batch #27, plate list No. 2090~2129 received from American Bridge/Fluor (ABF). QA Inspector Brannon went to the ZPMC material storage yard accompanied by ZPMC Quality Control Mr. Sun Bo. QA Inspector Brannon observed a total of 1 out of 40 plates for batch #27. The plate were observed for its general condition and markings. Plate material thicknesses was 14mm. The plate was designated as A709-345F2-X. Plate material list for batch #27 was accompanied with

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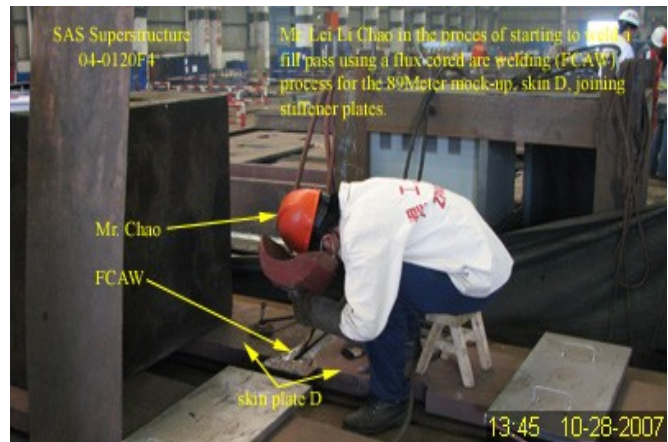
material test reports (MTR's). The MTR's could not be reviewed on this date and will be reviewed at the earliest opportunity. QA Inspector Brannon assigned lot number B22-058-07 to the 1 plate observed on this date.

## 89 Meter Mockup-Skin Plate C (Sub Assembly-MA22):

QA Inspector Brannon randomly observed ZPMC qualified welder Mr. Lei Li Chao ID #053619 groove welding fill passes at weld joint #9 for skin plate C, joining stiffener plates mp536A-1 to mp536B-1. Mr. Chao was observed welding in the 1G (flat) position utilizing flux cored arc welding (FCAW) process with a 1.4mm diameter electrode, filler metal brand Supercored 71H, class E71T-1 semi-automatic. QA Inspector Brannon observed preheat and welding parameters measured by the QC Inspector Mr. Sha Zhi to be: preheat temperature of 110°C and welding parameters amps of 316, volts of 28, a travel speed of 300 mm/min and shielding gas flow rate of 21 L/min. Welding parameters observed by QA Inspector Brannon appeared to be in general compliance with the approved Welding Procedure Specification (WPS) WPS-B-T-2231-B-U3-F, Revision 1.

## 89 Meter Mockup-Skin Plate D (Sub Assembly-MA23):

QA Inspector Brannon randomly observed ZPMC qualified welder Miss. Gu Caihong ID #053748 groove welding fill passes at weld joint #25 for skin plate D, joining skin plates mp510 to mp507. Miss. Caihong was observed welding in the 1G (flat) position utilizing submerged arc welding (SAW) process with a 4.8mm diameter electrode, filler metal brand JW-3, class EM12K machine. QA Inspector Brannon observed preheat and welding parameters measured by the QC Inspector Mr. Xu Lefeng to be: preheat temperature of 110°C and welding parameters amps of 649, volts of 35, and a travel speed of 631 mm/min. Welding parameters observed by QA Inspector Brannon appeared to be in general compliance with the approved Welding Procedure Specification (WPS) WPS-B-T-2221-B-U3c-S, Revision 1.



## Summary of Conversations:

No relevant conversations on this date.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Brannon, Sherri	Quality Assurance Inspector
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<b>Reviewed By:</b>	Cuellar, Robert	QA Reviewer
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